



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,778	12/29/2003	William J. LaBarge	DP-309619	1356

7590 11/15/2007
Paul Marshall
Delphi Technologies, Inc.
M/C-480-410-202
P.O. Box 5052
Troy, MI 48007

EXAMINER

NGUYEN, CAM N

ART UNIT	PAPER NUMBER
----------	--------------

1793

MAIL DATE	DELIVERY MODE
-----------	---------------

11/15/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p align="center">10/747,778</p>	<p>Applicant(s)</p> <p align="center">LABARGE ET AL.</p>	
	<p>Examiner</p> <p align="center">Cam N. Nguyen</p>	<p>Art Unit</p> <p align="center">1793</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/31/07 (an amendment/response).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18, 19, 21-24, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18, 19, 21-24, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on originally filed is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants' amendment and remarks, filed August 31, 2007, has been made of record and entered. Claims 1-17, 20, & 25 have been canceled. Claim 18 has been amended.

Claims 18-19, 21-24, & 26-27 are currently pending and under consideration.

Claim Rejections - 35 USC § 102(e)

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 18, 22, 24, & 26-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim (US Pat. 6,855,661 B2).

Kim discloses a process of preparing a catalyst for purification of exhaust gas, comprising at least a catalytic metal and a carrier, the process comprises the steps of: (1) preparing a solution of precursors of a zirconia-titania composite oxide, (2) adding an alkali solution to co-precipitate said solution to form a mixed gel thereof, (3) drying, shaping, and calcining the resulting mixed gel to form a composite oxide, (4) depositing at least one catalytic metal selected from a group consisting of platinum, palladium, rhodium, ruthenium, and rhenium; etc. (see col. 18, claim 6). Kim further discloses that the organic precursors of $\text{Ti}(\text{OR})_4$ and $\text{Zr}(\text{OR})_4$ can be used with alcohols, such as n-propyl or iso-propyl to prepare the zirconia-titania carrier precursors. The carrier precursors are dissolved in water to be converted to their hydroxides, $\text{Ti}(\text{OH})_4$ and $\text{Zr}(\text{OH})_4$, which are then neutralized and precipitated with an alkali to form gels or mixed gels thereof (see col. 6, ln 1-29). The calcination is carried out at a temperature of 400 to 1000°C (see col. 7, ln 57-59).

There is no patentable distinction seen between the claimed process and that disclosed by Kim. Thus, the claims are anticipated by the teaching of the reference.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 19, 21, & 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (US Pat. 6,855,661 B2), as applied to claims 18, 22, 24, & 26-27 above, and further in view of Manzer et al., "hereinafter Manzer", (US Pat. 6,235,677 B1).

Kim discloses a process of preparing a catalyst as described above, except for the solid solution further comprises yttrium and lanthanum, and the organometallic precursor further comprises methacrylic acid.

It would have been *prima facie obvious* to one of ordinary skill in the art at the time the invention was made to have incorporated these known promoters into the process of Kim in order to achieve an improved and promoted catalyst having enhanced in activity, because they are known as useful catalyst promoters as evidenced by Manzer (see Manzer at col. 15, claim 14).

With respect to the methacrylic acid required in claim 23, it would have been obvious to use the "methacrylic acid" in the process of Kim to destabilize the colloids to form colloidal gels of the carrier precursors because Manzer fairly teaches that once the particles come in close enough contact when destabilized, polymerization and crosslinking reaction between the surface functional groups can occur. Thus, the addition of an acid or a base is used to destabilize the colloids to form colloidal gels of the carrier precursors (see Manzer at col. 7, ln 11-27).

Response to Applicants' Arguments

6. Applicants' response filed on August 31, 2007 has been carefully reviewed, but not deemed persuasive because of the following reasons.

Applicants urged, that “Kim does not disclose mixing an already-formed titanium alkoxide with an already-formed zirconium alkoxide as required by Applicants’ claims” is noted. It is not found persuasive because there is no heat treatment step involved between the step of preparing the titanium alkoxide and the step of preparing the zirconium alkoxide in the instant claims. Thus, it is considered the solution of precursors of zirconia-titania composite oxide as prepared in the first step of the Kim reference is the same as the step of mixing the titanium alkoxide and the zirconium alkoxide together to form an organometallic precursor as being claimed. Further, Kim also teaches to use alcohol to prepare the titanium and zirconium carrier precursors, which provides for the same process steps as being required by applicants in the instant claims.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 1793

Conclusion

8. Claims 18-19, 21-24, & 26-27 are pending. Claims 18-19, 21-24, & 26-27 are rejected.

No claims are allowed.

Contacts

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Primary Examiner Cam N Nguyen, whose telephone number is 571-272-1357. The examiner can normally be reached on M-F, 9:00 AM - 6:30 PM, at alternative work site.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Cam N. Nguyen/

Nguyen/cnn

Primary Examiner

November 09, 2007

Art Unit: 1793